

**AMENDMENTS TO THE CLAIMS:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. **(Currently amended)** A method for securing by software confinement, a computer system which executes codes which manipulate data, involving:

- at least one memory manager managing memory allocation units, units, and

- at least one possessor of memory allocation units, possessors and requesters of memory allocation units,

- at least one requesters of memory allocation units,

said method comprising the following steps:

- performing an allocation of memory by the memory manager upon request from another component of the operating system which transmits to said memory manager, the identity of the requester;

- performing a check by the aforesaid memory manager of the whole of the memory allocation units, each memory allocation unit being associated with a possessor of the of said memory allocation unit;

- performing an encryption of the data of each possessor by means of a key associated with this possessor;

- performing a check by the memory manager, for each request to access a memory allocation unit, of the identity of the requester; if this identity is not identical to that of the possessor of said memory allocation unit, then access to the memory allocation unit is refused by the memory manager;
- performing, by means of the memory manager, encryption (in the case of a write request) or decryption (in the case of a read request) of the ~~relevant data contained in (in the case of a write request) or requested by (in the case of a read request) the request~~ with the key associated with the possessor, this key being at least recalculated by the memory manager;  
wherein the memory manager dynamically calculates the key associated with a possessor from a secret associated with said possessor and a master key to which only the memory manager has access.

**2.-9. (Canceled)**

10. **(Previously presented)** The method according to claim 1, wherein one of said memory allocation units is a page with a fixed size or a block with a variable size.

11. **(Currently amended)** The method according to claim 1, wherein one of said possessors or requesters is ~~an user application of the user of the operating system of the computer system or the said operating system itself.~~

12. **(Currently amended)** The method according to claim 1, wherein at least one of said memory allocation units is a page, and the memory manager, when it receives a request for allocating a block on behalf of a possessor of a memory

allocation unit, first searches for a page with the same possessor so that all the blocks allocated by said possessor are found grouped in one or several dedicated pages.

13. **(Currently amended)** The method according to claim 1, wherein transmission of the identity of the requester is accomplished either by managing a current context, or by passing parameters to parameters with the requests to functions of the memory manager.

14. **(Cancelled)**

15. **(Previously presented)** The method according to claim 1 wherein the memory manager associates the key with each set of possessor and memory allocation unit instead of associating a unique key with each possessor.

16. **(Currently amended)** The method according to claim 1 wherein the memory manager integrates into each memory allocation unit, an area with which allowing the integrity of the latter said memory allocation unit to be may be checked.

17. **(Currently amended)** The method according to claim 1 wherein associating different security levels are associated with the possessors and using different encryption means are used according to the associated security level.

18. **(Currently amended)** The method according to claim 1 being combined with a physical protection mechanism wherein the computer system includes a physical memory protection mechanism that prevents at least one requester from accessing at least one memory allocation unit.

19. **(Currently amended)** The method according to claim 1 being implemented on an embedded system such as a terminal of the portable telephone

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type, a bank payment terminal, a portable payment terminal, a digital assistant or PDA,  
or a chip card.